

***Geminorhabdus* gen. n., a new genus related to *Exorhabdus* Lewis, 1910 (Coleoptera: Histeridae)**

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Abstract. Taxonomical and systematic status of some species of *Exorhabdus* was analyzed. A new genus, *Geminorhabdus* gen. n., with *Hister simulans* as a type, was established. All the species transferred to *Geminorhabdus* are keyed and catalogued. *Hister sulcipygus* has been synonymized with *H. simulans*.

INTRODUCTION

The paper is based on the materials loaned from the following institutions: The British Museum of Natural History, London (BMNH), Muséum National d'Histoire naturelle, Paris (MNHN), Museum für Naturkunde der Humboldt-Universität zu Berlin (MNHUB) and Musée royal de l'Afrique Centrale, Tervuren (MRAC). Some information was from the author's collection (CHSM).

RESULTS

When redefining lately the genus *Exorhabdus* Lewis, the author (Mazur, 2005: 52) pointed out, among others, a very sclerotized and almost cylindrical aedeagus with short basal piece as a principal character for the genus. Later (Mazur, 2006: 68) he added the presence of the recurrent arm of lateral metasternal stria, being arcuate and not confluent with the metasternal-metepisternal suture, as a character distinguishing the species of *Exorhabdus* from those of *Hister* Linnaeus.

Detailed examination of all the species of the genus *Exorhabdus* showed, however, that there were species in which the aedeagus is very broad and not so strongly sclerotized and, on the other hand, the recurrent arm of lateral metasternal stria is obsolete or absent. These characters are to be found among the species tracing to a couplet "5" in Bickhardt's key (1919: 64).

The species classified here differ from the remaining species of *Exorhabdus* by concave and strongly margined mandibles, by carinate frontal and lateral pronotal striae. Furthermore, the aedeagus is very broad and weakly sclerotized as well as the recurrent arm of lateral

metasternal stria is absent in some species. Compiling both, the external and internal features, the establishing of a new species is needed.

***Geminorhabdus* gen. n.**

Type species. *Hister simulans* Schmidt, 1889, masculine gender.

Description. Body oval, moderately convex. Mandibles concave, their external margin strongly elevated. Frontal stria carinate. Labrum concave, margined anteriorly (Figs 5, 7, 10). Pronotum with two lateral striae, carinately elevated. Pronotal epipleura covered with ciliae. Elytral striae deep and crenate. Inner subhumeral stria incised and crenate, reaching to oblique humeral stria and crossing it, a fragment of outer subhumeral stria also present (Figs 1, 3, 8). Pygidial segments more or less densely and coarsely punctured. Prosternal lobe doubly margined laterally. Anterior margin of mesosternum emarginate, straight or very feebly sinuous, marginal stria present, clearly impressed and complete (Figs 2, 6, 9). Recurrent arm of lateral metasternal stria complete or reduced (Figs 2, 4, 6, 9, 11). Protibia with three dents on outer margin, profemural stria nearly complete. Edeagus widened, moderately sclerotized, ratio of its length to basal piece about 4:1 (Figs 13-15, 18-19). Eight tergite longer than wide (Figs 16, 20), the 10th tergite divided into two parts (Figs 17, 21).

Derivatio nominis. The name indicates a close relationship with the genus *Exorhabdus*.

REVIEW OF THE SPECIES

***Geminorhabdus angolensis* (Thérond, 1963) comb. n.**

(Figs 1-2)

Type material. Paratype (♀): Angola, Alto Cubal Chimbassi, x.1953, Schmiedebach leg. [MNHN].

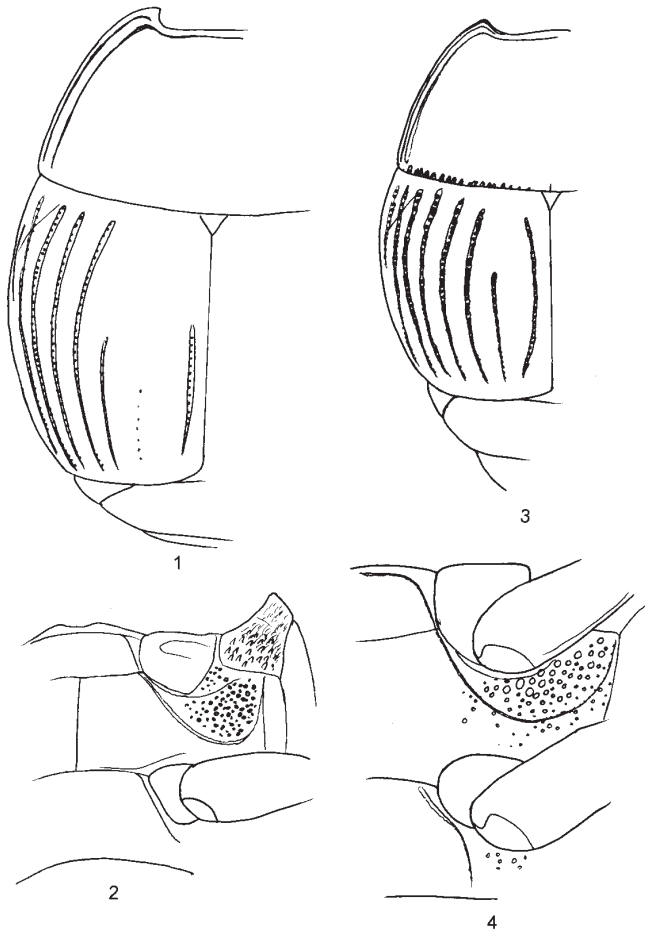
Remarks. Described (Thérond, 1963: 108) as closely related to *E. mayumbensis* Burgeon, from which it may be separated by the characters given in the key. General appearance and some morphological details are figured (Figs 1-2).

***Geminorhabdus crenulistrius* (Lewis, 1913) comb. n.**

(Figs 3-5)

Type material. Holotype (♀): [DR Congo], Musée du Congo, Mufungwa, Sampwe, 1/16. xiii-1911, Dr. Bequaert, [MRAC].

Remarks. Some morphological characters are figured (Figs 3-5).



Figs. 1-4.
1-2- *Geminorhabdus angolensis*; 3-4- *G. crenulistrius*: 1, 3- left part of pronotum and elytron; 2, 4- lateral part of meso- and metasternum.

***Geminorhabdus marshalli* (Lewis, 1897) comb. n.**
(Figs 6, 13-17)

Material examined. Zambia: 60 km East of Isoka, 3.xii.2004, 1 ex., NW Prov. Mufumbwe, Kasempa, 22.xi.2003, 1 ex., Chipada, 30.xi.2004, 1 ex., K. Werner & Smrz leg.; Malawi: (Liongwe-distr.), Dzalanyama For. Res., 1300 m, 18/22.ii.2004, 1 ex., (Mzimba-distr.), Vwaza Game Res., 1000 m, 30/31.i.2004, 1 ex., Heinz leg. [CHSM].

Remarks. Compared originally (Lewis, 1897: 189) with *Hister longicollis* Marseul (now *Zabromorphus*), probably owing to a presence of inner subhumeral stria but it is hard to find closer relationship between both of them. A pretty variable species, especially in the body size and presence of outer subhumeral stria. To a better recognition of this species, the figures of some morphological details and male genital structure are given (Figs 6, 13-17).



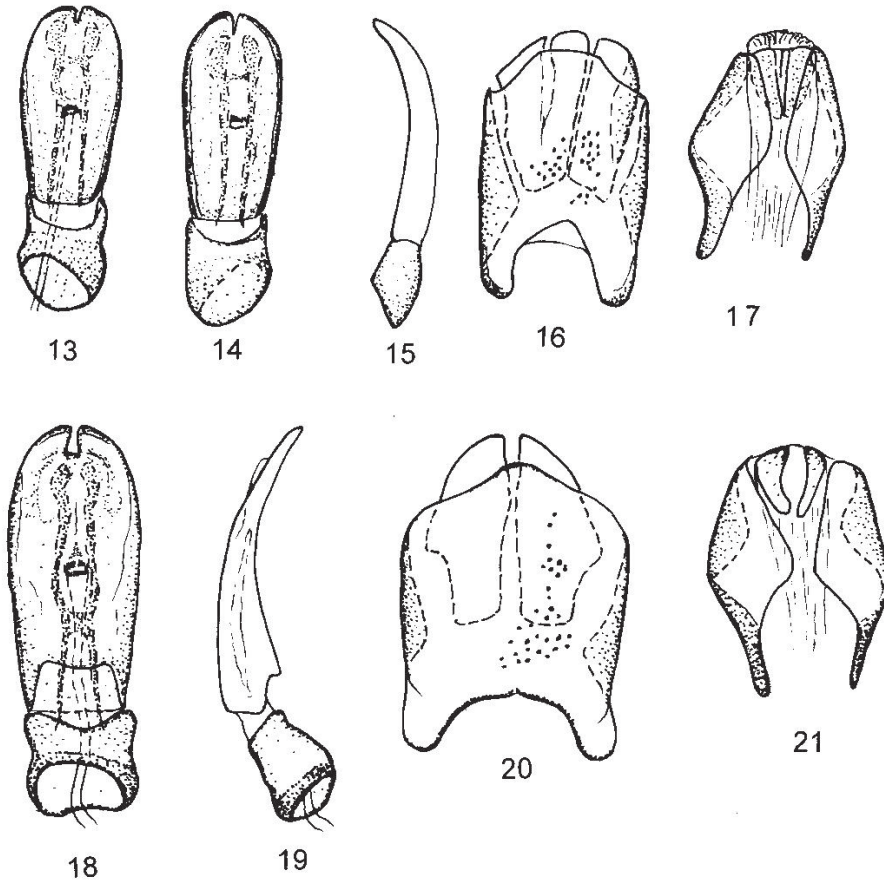
Figs. 5-12. 5- *Geminorhabdus crenulistrius*; 6- *G. marshalli*; 7-9- *G. mayumbensis*; 10-11- *G. simulans*; 12 - pygidium of "sulcipygus"; 5, 7, 10- head; 8- left part of pronotum and elytron; 6, 9- lateral part of meso- and metasternum; 11- lateral part of metasternum.

Geminorhabdus maymbensis (Burgeon, 1939) comb. n.

(Figs 7-9)

Type material. Holotype (♀): [DR Congo], Musée du Congo, Mayumbe: Temvo - 1935, Van Alstein [MRAC].

Remarks. Placed originally within the “marshalli-simulans” group, but it differs from it by weakly elevated frontal stria (transition to “afer” group; Burgeon, 1939: 88). Anyway, the shape of lateral metasternal stria is typical for the species of *Geminorhabdus*.



Figs. 13-21. Genital structure of the male; 13-17- *Geminorhabdus marshalli*; 18-21- *G. simulans*; 13-15, 18-19- aedeagus; 16, 20- 8th tergite, dorsally, 17, 21- 9th and 10th tergites; 13, 18- ventrally; 14- dorsally, 15, 19- laterally.

***Geminorhabdus simulans* (Schmidt, 1889) comb. n.**
(Figs 10-12, 18-21)

Hister sulcipygus Lewis, 1889: 282 **syn. n.**

Type material. *Exorhabdus simulans* (Schmidt, 1889). Holotype (♀): [Tanzania], Zanzib. [ar], [MNHUB]. Paratype (♂): [Kenya], Brit. O. Africa, Kibwezi, (Nr. 12), Huebner S.V., [MNHUB].

Hister sulcipygus Lewis, 1889. Holotype (♂): [Kenya], Mombas, [with notes on two labels]: 1) Strong frontal carinal + marginal clypeus, 2) Have seen an example without 2 foveae, 20.ii.[19]03, G. Lewis Coll., BM. 1926-369. [BMNH].

Other material studied: [Tanzania], Massai-steppe, 1 ex; D. Ost.-Afrika, Tanga Umgegend, iii-iv.[18]93, O. Neumann S., 1 ex; [Kenya], Afr. Or., Ikutha, 10 ex. [MNHUB], Kenya, S. Shimba Hills, AET - 27.xi.1997, 1 ♂, M. Snížek leg. [CHSM].

Remarks. Described originally as different species but a comparison of the types confirmed that both of them belonged to same species.

Lewis (1889: 282) compared *H. sulcipygus* with *Hister ignavus* Fahraeus owing to a presence of inner subhumeral stria. Lewis also emphasized a curious shape of pygidium: “two sulci on the outer margin of the pygidium are deep, somewhat oval, and unlike anything yet seen in the genus *Hister*.” Such a pygidial sculpture (Fig. 12), however, was only a kind of teratology which has been later confirmed by Lewis (1903: 425): “A second specimen of this very distinct species has been brought home from South Abyssinia ... and it is now in the Berlin Museum. There are no sulci in the pygidium, and therefore is likely (...) that the sulci I described are abnormal”.

Bickhardt (1919: 99) in his monograph expressed a supposition that *Hister sulcipygus* might have been synonymous with *H. obtusisternus* Schmidt. This supposition was confirmed by Théron (pers. com.) and that is why both these species have been synonymized by the author (Mazur, 1984: 195).

The descriptions of *Exorhabdus simulans* and *Hister sulcipygus* were published in March, 1889 and it is hard to decide which name has a priority. According to the rules of the International Code of Zoological Nomenclature it is recommended to keep a name which is better known and more frequently used.

Thus, *Exorhabdus simulans* (Schmidt, 1889) = *Hister sulcipygus* Lewis, 1889, **syn. n.** and the name “simulans” with the generic name *Geminorhabdus* (*G. simulans*, **comb. n.** has a priority).

Additionally, some details of the internal and external morphology are figured (Figs 10-12, 18-21).

KEY TO SPECIES

- 1 Recurrent arm of the lateral metasternal stria present (Fig. 2, 4) 2
- Recurrent arm of the lateral metasternal stria absent (Figs 6, 9, 11) 3

- 2 Fourth dorsal and sutural stria a little abbreviated basally. Fifth dorsal stria reaching to the midlength of elytra. All the dorsal striae strongly crenulate (Fig. 3). *G. crenulistrius* (Lewis)
- Fourth dorsal and sutural stria strongly abbreviated basally, reaching to the midlength of elytra. Fifth dorsal stria obsolete or absent. 4th, 5th and sutural stria feebly crenulate (Fig. 1). *G. angolensis* (Thérond)
- 3 Sutural stria wanting. *G. simulans* (Schmidt)
- Sutural stria present (Fig. 8) 4
- 4 Fifth dorsal stria absent (Fig. 8). Anterior margin of mesosternum distinctly emarginate (Fig. 9). *G. mayumbensis* (Burgeon)
- Fifth dorsal stria present apically. Anterior margin of mesosternum truncate or feebly sinuous (Fig. 6). *G. marshalli* (Lewis)

CATALOGUE

Geminorhabdus gen. n.

Type species: *Hister simulans* Schmidt, 1889

<i>angolensis</i> (Thérond, 1963: 108)	Angola
<i>crenulistrius</i> (Lewis, 1913: 355)	DR Congo, Togo
<i>marshalli</i> (Lewis, 1897: 188)	Zimbabwe, Zambia, DR Congo, Mozambique, Malawi, Tanzania
<i>angoniensis</i> Lewis, 1900: 280	
<i>nyassae</i> Lewis, 1907: 313	
<i>mayumbensis</i> (Burgeon, 1939: 88)	DR Congo
<i>simulans</i> (Schmidt, 1889: 85)	Tanzania, DR Congo, Kenya, South Ethiopia
<i>sulcipygus</i> Lewis, 1889: 282 syn. n.	

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